Amendment and Response Serial No. 10/056,212

AMENDMENTS TO THE CLAIMS

(Currently amended) A positive working imageable composition, comprising:

 in-in-receptive_Divdrox/functional resist comprising a covalently bound radiation sensitive group capable of increasing the solubility of said imageable composition in an alkaline developer upon exposure to tradiation;

an acid generator;

a colorant; and

an isocyanate crosslinking agent.

- 2. (Cancelled)
- (Previously presented) The imageable composition of claim 1, wherein said covalently bound radiation sensitive group is sensitive to ultraviolet radiation.
- (Currently amended) The imageable composition of claim-3_1, wherein said radiation

and a mixture thereof;

wherein each of R^1 , R^2 , R^3 , R^4 and R^4 is independently selected from the group consisting of hydrogen, linear, branched or cyclic alkyl of 1 to 22 carbon atoms, arallyl of 6 to 22 carbon atoms, aryl, alkaryl, alkoxy of 1 to 22 carbon atoms, halcalkyl, halogen, acyl, ester and cyano.

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 (Currently amended) The imageable composition of elaim 1. wherein said radiation sensitive group is a moiety selected from the group consisting of moieties of the formula:

- (Cancelled)
- 7. (Currently amended) The imageable composition of claim 1, wherein said hydroxyfunctional resin further comprises includes a resin moisty derived from a polyfunctional resin selected from the group consisting of a novolak resin, a pyrogallol/acctone resin, polyvinyl phenol polymer, vinyl phenol/hydrocarbyl acrylate copolymer, a resole resin, an acrylic resin, a polyester resin, a polyurchane resin, a polyel and a mixture thereof.
- (Previously presented) The imageable composition of claim 7, wherein said polyfunctional resin is a phenol novolak resin, a cresol novolak resin, a phenol/cresol novolak resin, a resole resin or a mixture thereof.
- 9. 12. (Cancelled)
- 13. (Previously presented) The imageable composition of claim 1, wherein said isocyanate crossifining agent is selected from the group consisting of isophrone diisocyanate, methylene-bis-phenty (diisocyanate, toluene diisocyanate, hexamethylene) diisocyanate, tetramethylxylylene diisocyanate, dimens theroof, adducts theroof with diols, adducts theroof with polyesters, adducts thereof with polyesters, adducts thereof with activity in the polyesters, adducts thereof with a covariate state of the polyesters, adducts thereof with an isocyanate blocking agent and mixtures thereof.
- 14. (Currently amended) The imageable composition of claim-13_1, wherein said isocyanate crosslinking agent further-comprises a blocking agent selected from the group consisting of: a phenol, an oxime, a lactam and a pyrazole.

- 15. (Currently amended) The imageable composition of claim 141, wherein said isocyanate crosslinking agent comprises a blocking agent is selected from phenol, methyl cthyl ketone oxime, 2-pyrrolidone, 2-piperidone, caprolactam or 3.5-dimethyloryszole.
- 16. (Cancelled)
- 17. (Cancelled)
- 18. (Currently amended) The composition of claim 17_l, wherein said colorant is a solorant dye is selected from the group consisting of: crystal violet, crystal violet lactone, basonyl blue, victoria pure blue BO, victoria blue B, blue colorant dye victoria blue FBR represented by the formula:

and a mixture thereof.

- 19. (Cancelled)
- 20. (Currently amended) The imageable composition of claim-16_L, wherein said acid generator is a light sensitive triazine compound of the formula:

wherein Z selected from the group consisting of: hydrogen, linear, branched or cyclic alkyl of 1 to 22 carbon atoms, aralkyl of 6 to 22 carbon atoms, aryl, alkuryl, alkoxy of 1 to 22 carbon atoms, haloalkyl, halogen, acyl, ester, cyano, a moiety of the formula:

wherein

each of R⁴, R², R⁴ and R² is independently selected from the group consisting of ydrogon, linear, branched or eyelic alleyl of 1 to 22 extron atoms, anallyl of 6 to 22 extron atoms, anyl, allewyl, allowy of 1 to 22 extron atoms, lacklody, halogon, anyl, cater and cyano, or R² and R² or R² and R² together with cutton atoms to which they are attacked to form a cyclosiphatic, beamor a substituted beam of me.

R¹⁰ is selected from the group consisting of: linear, branched or cyclic alkyl of 1 to 22 carbon atoms, aralkyl of 6 to 22 carbon atoms, aryl, alkaryl, haloalkyl, acyl, ester and cyane; and Y is oxygen or sulfur.

21. (Currently amended) The imageable composition of claim-20 1, wherein said acid generator is a light sensitive triazine compound is of the formula;

wherein

each of R², R², R² and R² is independently selected from the group consisting of: hydrogen, linear, branched or cyclic alixyl of 1 to 22 carbon atoms, arally) of 6 to 22 carbon atoms, ary, alixaryl, alixony of 1 to 22 carbon atoms, haloalixyl, halogen, acyl, ester and cyana, or R² and R² or R² and R² or R² and R² to gether with carbon atoms to which they are attached to form a cyclosliphatic, bernzo or a substituted benzo ring:

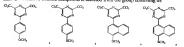
R10 is selected from the group consisting of: linear, branched or cyclic alkyl of 1 to 22

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carbon atoms, aralkyl of 6 to 22 carbon atoms, aryl, alkaryl, haloalkyl, acyl, ester and cyano; and

Y is oxygen or sulfur.

22. (Currently amended) The imageable composition of claim-31 1, wherein said acid generator is a light sensitive triazine compound is selected from the group consisting of:



and a mixture thereof.

- 23. (Currently amended) The imageable composition of claim-16_1, wherein said acid generator is selected from the group consisting of: an iodonium salt, a sulfonium salt, a hydrocarbyloxyaminonium salt, an aryl diazonium salt and a combination thereof.
- 24. 33. (Cancelled)
- 34. (Currently amended) An imageable element comprising:

a substrate comprising lithographic substrate having a hydrophilic surface; and a positive working imageable composition coated on a-the hydrophilic surface of said substrate, said composition comprising:

> an-ink-receptive-g hydroxyfunctional resin comprising a covalently bound radiation sensitive group capable of increasing the solubility of said imageable composition in an alkaline developer upon exposure to radiation; and

an isocyanate crosslinking agent.

35. (Cancelled)

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- (Original) The imageable element of claim 34, wherein said positive working imageable composition further comprises a colorant and an acid generator.
- 37. (Currently amended) A method of producing an imaged element comprising the steps of: providing an imageable element comprising a substrate comprising higherantic customers, and a hydrophilic surface and a positive working imageable composition costed on the hydrophilic surface of said substrate, wherein said imageable composition comerises:
 - en ink-receptive_1_hydroxyfunctional resin comprising a covalently bound radiation sensitive group capable of increasing the solubility of said imageable composition in an alkaline developer upon exposure to radiation—and
 - an isocyanate crosslinking agent:
 - heating said imageable element at a temperature and length of time sufficient to produce a crosslinked imageable element;
 - produce a crossunkee imageable element; imagewise exposing said crosslinked imageable element to radiation to produce an imagewise exposed element having exposed and unexposed regions; and
 - removing the exposed regions of said imageable composition to produce said imaged element.
- 38. (Original) The method of claim 37, wherein said positive working imageable composition further comprises a colorant and an acid generator.
- (Currently amended) The method of claim 37, wherein said exposing step is carried out using includes exposing said crosslinked imageable element to ultraviolet radiation.
- 40. 49. (Cancelled)
- 50. (New) The imageable composition of claim 1, wherein said acid generator is a salt including an anion derived from a non-volatile acid.

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- 51. (New) The imageable composition of claim 1, wherein said acid generator is a light sensitive triazine compound, an onium salt, a covalently bound sulfonate group-containing compound, a hydrocarbylsulfonamido-N-hydrocarbyl sulfonate, or a combination thereof.
- 52. (New) The imageable composition of claim 1, wherein said acid generator is an onium salt including a non-nucleophilic anion.
- 53. (New) The imageable composition of claim 1, wherein said acid generator is a monomeric or oligomeric aromatic diazonium salt.
- 54. (New) The imageable element of claim 34, wherein said lithographic substrate is an aluminum sheet.
- 55. (New) The imageable element of claim 34, wherein said covalently bound radiation sensitive group is sensitive to ultraviolet radiation.
- 56. (New) The imageable element of claim 34, wherein said radiation sensitive group is a moiety selected from the group consisting of:

wherein each of \mathbb{R}^1 , \mathbb{R}^2 , \mathbb{R}^3 , \mathbb{R}^4 and \mathbb{R}^3 is independently selected from the group consisting of: hydrogen, linear, branched or cyclic alkyl of 1 to 22 carbon atoms, aralkyl of 6 to 22 carbon atoms, aryl, alkaryl, alkoxy of 1 to 22 carbon atoms, haloulkyl, halogen, acyl, ester and evano. Amendment and Response Scrial No. 10/056,212 Page 9 of 16

57. (New) The imageable element of claim 34, wherein said radiation sensitive group is a moiety selected from:

- 58. (New) The imageable element of claim 14, wherein said hydroxyfinetional resin includes a resin moiety derived from a polyfunctional resin selected from the group consisting of a novolak resin, a pyrogaliol/acedone resin, polywinyl phenol polymer, vinyl phenol/hydrocarbyl acrylate copolymer, a resole resin, an acrylic resin, a polyesen resin, a polyesen makure thereof.
- 59. (New) The imageable element of claim 34, wherein said polyfunctional resin is a phenol novolak resin, a cresol novolak resin, a phenol/cresol novolak resin, a resole resin or a mixture thereof.
- 60. (New) The imageable element of claim 34, wherein said isocyanate crosslinking agent is selested from the group consisting of isophorous diluceyanate, nethylene-bis-phanyl disocyanate, bubene dilisocyanate, becamethylene discoyanate, to bubene dilisocyanate, becamethylene discoyanate, dimers thereof, adducts thereof with diols, adducts thereof with jolyesters, adducts thereof with acylic resins, adducts thereof with polyesters, adducts thereof with acylic resins, adducts thereof with polyurathane polyols, adducts thereof with an isocyanate blocking agent and mixtures thereof.
- 61. (New) The imageable element of claim 34, wherein said isocyanate crosslinking agent comprises a blocking agent selected from the group consisting of: a phenol, an oxime, a lactam and a pyrazole.

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- 62. (New) The imageable element of claim 34, wherein said isocyanate crosslinking agent comprises a blocking agent selected from phenol, methyl ethyl ketone oxime, 2-pyrrolidone, 2-piperidone, caprolactam or 3,5-dimethylpyrazole.
- 63. (New) The imageable element of claim 36, wherein said colorant is a colorant dye selected from the group consisting of: crystal violet, crystal violet lactone, basonyl blue, victoria pure blue BO, victoria blue B, blue colorant dye victoria blue FBR represented by the formula:

, and a mixture thereof.

- 64. (New) The imageable element of claim 36, wherein said acid generator is a salt including an anion derived from a non-volatile acid.
- 65. (New) The imageable element of claim 36, wherein said acid generator is a light sensitive triazine compound, an onium salt, a covalently bound sulfonate group-containing compound, a hydrocarbylsulfonamido-N-hydrocarbyl sulfonate, or a combination thereof.
- 66. (New) The imageable element of claim 36, wherein said acid generator is a light sensitive triazine compound of the formula:

wherein Z selected from the group consisting of: hydrogen, linear, branched or cyclic alkyl of 1 to 22 carbon atoms, aralkyl of 6 to 22 carbon atoms, aryl, alkaryl, alkoxy of 1 to 22 carbon atoms, haloalkyl, halogen, acyl, ester, cyano, a moiety of the formula: Amendment and Respon Serial No. 10/056,212

wherein

each of R⁴, R², R² and R² is independently selected from the group consisting of hydrogen, linear, branched or cyclic alkyl of 1 to 22 carbon atoms, artikyl of 6 to 22 carbon atoms, aryl, allanyl, alknoy of 1 to 22 carbon atoms, halolakly, halogen, acyl, ester and cyanco, or R² and R² or R² and R² together with earbon atoms to which they are attached to form a cyclosiplatic, begue or a substrated bearso rine;

R¹⁰ is selected from the group consisting of: linear, branched or cyclic alkyl of 1 to 22 carbon atoms, aralkyl of 6 to 22 carbon atoms, aryl, alkaryl, haloalkyl, acyl, ester and cyano; and Y is oxygen or sulfur.

67. (New) The imageable element of claim 36, wherein said acid generator is a light sensitive triazine compound of the formula;

wherein

each of R⁶, R⁷, R⁸ and R⁹ is independently selected from the group consisting of: hydrogen, linear, branched or cyclic alkyl of 1 to 22 carbon atoms, arallyl of 6 to 22 carbon atoms, ary, alkaryl, alkary of 1 to 22 carbon atoms, haloalkyl, halogen, acyl, ester and cyano, or R⁸ and R⁷ or R⁸ and R⁸ together with carbon atoms to which they are attached to form a cycloallybatic, berazo or a substituted berazo ring:

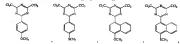
R 10 is selected from the group consisting of: linear, branched or cyclic alkyl of 1 to 22

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carbon atoms, aralkyl of 6 to 22 carbon atoms, aryl, alkaryl, haloalkyl, acyl, ester and cyano; and

Y is oxygen or sulfur.

68. (New) The imageable element of claim 36, wherein said acid generator is a light sensitive triazine compound selected from the group consisting of:



and a mixture thereof.

- (New) The imageable element of claim 36, wherein said acid generator is a monomeric or oligomeric aromatic diazonium salt.
- 70. (Now) The imageable element of claim 36, wherein said acid generator is selected from the group consisting of: an iodonium salt, a sulfonium salt, a hydrocarbyloxysulfonium salt, a hydrocarbyloxysulfonium salt, an aryl diazonium salt and a combination thereof.
- 71. (New) The imageable element of claim 36, wherein said acid generator is an onium salt including a non-nucleophilic anion.
- 72. (New) The method of claim 37, wherein said lithographic substrate is an aluminum sheet.